

## THE NATIONAL IMMUNISATION ADVISORY COMMITTEE

January 2015

### Rationale for recommendation of meningococcal B (MenB) vaccine for close contacts of meningococcal B disease

In June 2014 the National Immunisation Advisory Committee recommended  
*"In addition to chemoprophylaxis immunisation with MenB vaccine is recommended for all previously unimmunised close contacts of meningococcal disease"*

<http://www.hse.ie/eng/health/immunisation/hcpinfo/guidelines/changes0906.pdf>

The recommendation for MenB vaccine for close contacts from 2 months of age was made taking account of the following:

1. The current evidence is that the vaccine is a safe and effective vaccine.
2. The predicted strain coverage of MenB vaccine in Ireland is 68% (95% CI: 61% - 83%)\*.
3. Close contacts of meningococcal B disease are at increased risk of invasive disease and are routinely recommended chemoprophylaxis. It is recognised that chemoprophylaxis decreases the risk of invasive disease; however it does not eliminate it entirely.

The risk of invasive disease, even among those who have received chemoprophylaxis, is greatest in household contacts. In a systematic review the attack rate among household contacts who received chemoprophylaxis with an antibiotic capable of eradicating meningococcal carriage was estimated (108/100 000) and was 11 times higher than the CDC threshold for mass vaccination in outbreaks (10/100 000).

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2870749/>

It is recognised that close contacts are at increased risk of being recolonised and can then infect susceptible persons, leading to disease. A UK study (Stuart et al) found that in the Gloucester region in 1988 household contacts had a relative risk of infection 750 times that of other people in the health district studied.

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1835933/pdf/bmj00221-0033.pdf>

4. Vaccination of close contacts of a case of meningococcal disease is recommended. Close contacts are defined as those individuals who have had close prolonged contact with a case in the 7 days before onset of illness (please see full guidance in chapter 7 of Guidelines for the Early Clinical and Public Health Management of Bacterial Meningitis (including Meningococcal Disease))

<http://www.hpsc.ie/AZ/VaccinePreventable/BacterialMeningitis/Guidance/File,12977,en.pdf>

Close contacts of a case include

- a. Household type contacts
- b. Intimate contacts
- c. Those who attended a house party with an index case in certain circumstances
- d. Situations where there is greater than usual interactions between members of an extended family and an index case
- e. Those in Pre-school child care facilities in certain circumstances

\* This estimate was derived from the application of the meningococcal antigen typing system (MATS) assay to 111 Irish invasive serogroup B isolates recovered during the 2009-10 to 2012-13 epidemiological years.

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The Public Health Agency of Canada and the National Advisory Committee of Immunization (NACI) of Canada has similar recommendations to those made in Ireland.

*“Vaccination or re-vaccination of certain close contacts should be considered in addition to chemoprophylaxis when the serogroup is vaccine preventable as it may further reduce the risk of subsequent meningococcal disease”.*

<http://www.phac-aspc.gc.ca/publicat/cig-gci/p04-meni-eng.php#a4>

[http://publications.gc.ca/collections/collection\\_2014/aspc-phac/HP40-105-2014-eng.pdf](http://publications.gc.ca/collections/collection_2014/aspc-phac/HP40-105-2014-eng.pdf)

[http://publications.gc.ca/collections/collection\\_2014/aspc-phac/HP40-104-2014-eng.pdf](http://publications.gc.ca/collections/collection_2014/aspc-phac/HP40-104-2014-eng.pdf)

In summary, the NIAC recommendation is consistent with Canadian (NACI/Public Health Canada) recommendations for other meningococcal vaccines and is based on expert opinion and evidence from experience gained from other meningococcal disease serogroups, and experience with chemoprophylaxis and vaccination.

The NIAC recommendation is also consistent the JCVI recommendations in that they recommend routine vaccination with MenB vaccine if it can be obtained at a cost effective price. Similarly, in Australia this vaccine has also been recommended for those wishing to decrease their risk, although it is not in the routine immunisation programme.